

REMARKS

Claims 1-24, 31-33 and 37-39 are all the claims pending in the application. Claims 25-30, 34-36, and 40-42 have been canceled without prejudice or disclaimer. Reconsideration and allowance of all the claims are respectfully requested in view of the following remarks.

Recapture and Oath/Declaration

1) The Examiner rejected claims 25-42 under § 151 as being improper recapture of broader claimed subject matter that was surrendered in the application on which the reissue is based. Applicants respectfully traverse this rejection because the claims do not recapture broader claimed subject matter surrendered in the application on which the reissue is based.

The test for recapture is as follows.

The first step in applying the recapture rule is to determine whether and in what "aspect" the reissue claims are broader than the patent claims.

The second step is to determine whether the broader aspects of the reissue claims relate to surrendered subject matter. To determine whether an applicant surrendered particular subject matter, we look to the prosecution history for arguments and changes to the claims made in an effort to overcome a prior art rejection.¹

With respect to claims 31-33 and 37-39, an "encoder" is narrower than a "displacement measuring means", and such subject matter has not been surrendered.

First, an "encoder" is narrower than a "displacement measuring means". As set forth in the specification, the displacement measuring means may be a resolver, a variable reluctance resolver, an optical encoder, or a magnetic encoder. See the specification at: col. 11, lines 21-30; col. 14, lines 41-63, for example. Accordingly, an encoder is only one example of what may be a displacement measuring means and, therefore, is narrower than a displacement measuring

¹ See: *Mentor Corp. v. Coloplast, Inc.*, 998 F.2d 992, 995-96, 27 USPQ2d 1521, 1524-25 (Fed. Cir. 1993); *Ball Corp. v. United States*, 729 F.2d 1429, 1436, 221 USPQ 289, 294-95 (Fed. Cir. 1984); and *In Re Clement*, 131 F.3d 1464, 1468-69, 45 USPQ2d 1161, 1164.

means. And a reissue claim narrower in scope than a canceled or amended one escapes the recapture rule entirely.²

Second, there has been no surrender of an encoder with respect to reissue claims 31 and 37. That is, reissue claims 31 and 37 are based on claims 13 and 16 in the ‘548 patent, which were claims 14 and 17 in the ‘180 application. In the ‘180 application, Applicants argued that claim 14 was distinguishable over the prior art because it set forth that a reinforcing means is made of substantially the same non-magnetic metal material as a partition wall.³ Additionally, Applicants argued that the ‘180 application claim 17 was distinguishable over the prior art applied by the Examiner, due to the recitation of a plurality of actuators.⁴ Further, the ‘180 application claims 14 and 17 were never amended to include a specific definition for the displacement measuring means. Accordingly, there has been no surrender of an encoder, which is only one example of what may constitute the displacement measuring means.

Further, claims 31 and 37 have been amended so as to broaden them in respects unrelated to that argued as distinguishing the ‘180 application claims 14 and 17 over the art applied by the Examiner. Also, submitted herewith is a supplemental reissue oath/declaration alleging the this error. See MPEP §1444. This is believed also to satisfy the Examiner’s concern, with respect to the oath/declaration, as set forth in items 2 and 3 on page 2 of the Office Action.

Specifically, claim 31 has been amended so as to remove the recitation “bearings for rotatably supporting a rotation shaft of said motor rotor to said housing” on lines 7 and 8 of the claim as presented June 22, 2001. Additionally, claim 37 has been amended so as to remove the recitation that the bearings are “a plurality of rolling bearings” More particularly, on lines 15 and 16 of claim 37 as presented June 22, 2001, “are a plurality of rolling bearings, said rolling

² *Ball*, 729 F.2d at 1436, 221 USPQ at 295.

³ April 14, 1998 amendment at page 6, line 14 – page 7, line 10, and January 11, 1999 amendment at page 5, line 21 – page 6, last paragraph.

⁴ April 14 amendment at page 12, 2nd full paragraph, and January 11 amendment at page 11, 1st paragraph.

“bearings supporting” has been changed to --support--. Because it was not argued that these elements distinguished the claims over the art, and because these elements were not added to the claims by amendment, there is no recapture bar to removing them from the claims. Further, these limitations are not necessary for patentability of these claims, and lead to Applicants claiming less than they had a right to.

In light of the above, the recapture rule does not bar reissue claims 31-33 and 37-39.

Claim Rejections - 35 U.S.C. § 112

2) The Examiner rejected claims 31, 32, and 33, under §112, 1st paragraph, as containing subject matter not described in the specification. Specifically, the Examiner asserts that the specification does not have a written description of the reinforcing means being substantially the same non-magnetic metal as the partition wall. Applicants respectfully traverse this rejection because the specification does, indeed, describe the claimed subject matter.

Although the specification does not specifically state “the reinforcing means is substantially the same non-magnetic metal as the partition wall”, such is inherently disclosed. And there is no *in haec verba*—i.e., word for word—requirement for satisfying the written description requirement. Instead, the newly added claim limitations can be supported in the specification through express, implicit, or inherent disclosure.⁵

The specification sets forth that the partition wall is made of a nonmagnetic metal material.⁶ The specification then sets forth that ring-shaped reinforcing members 40 and 41 are made of a nonmagnetic metal, and further states that they may be “made of the same material as the nonmagnetic partition wall.”⁷ And the reinforcing members are a reinforcing means.⁸ From

⁵ See MPEP § 2163(I)(B).

⁶ Specification at: col. 4, lines 33-34, 52-53; col. 5, lines 22-23; col. 7, lines 37-40.

⁷ Specification at: col. 7, lines 66-67; and col. 8, lines 2-4.

⁸ Specification at: col. 8, lines 20-24; col. 10, lines 40-46, and 58-61.

the above, one of ordinary skill in the art would readily recognize that Applicants had within their possession a reinforcing means being the same non-magnetic metal as the partition wall, as such is inherently disclosed in the specification.

In light of the above, the specification does indeed provide a written description of the reinforcing means being the same non-magnetic metal as the partition wall.

3) The Examiner also rejected claims 31, 32, and 33, under §112, 2nd paragraph, as indefinite. Specifically, the Examiner asserts the claims are indefinite because it is unclear what constitutes “substantially” the same material, as the specification is silent on any guidelines as to variations which are acceptable. In order to expedite prosecution of this application, Applicants have removed the term “substantially” from these claims. Specifically, in claim 31 as presented June 22, 2001, “substantially” has been deleted from line 16.

Claim Rejections - 35 U.S.C. § 102

4) The Examiner rejected claims 25, 27, 28, and 30, under §102(b) as being clearly anticipated by JP 03-150,041 to Horikoshi et al. (hereinafter Horikoshi). This rejection is believed to be moot.

5) The Examiner rejected claims 25, 26, 28, 29, 31, 32, 37, 38, 40, and 41, under §102(b) as being anticipated by Applicants’ Admitted Prior Art (hereinafter the APA) or, in the alternative, under §103(a) as being obvious over the APA in view of WO 94/23911 to Hofmeister (hereinafter Hofmeister).

With respect to claims 25, 26, 28, 29, 40, and 41, this rejection is believed to be moot .

With respect to claims 31, 32, 37, and 38, Applicants respectfully traverse this rejection because the APA fails to disclose every element as set forth in Applicants’ claims, and because the APA in combination with Hofmeister fails to establish *prima facie* obviousness in that the references fail to teach or suggest every element as set forth in Applicants’ claims.

Claim 31 sets forth a sealed actuator comprising a motor stator, a housing, a motor rotor, a hermetically sealing partition wall made of a nonmagnetic metal material and disposed at a gap

between the stator and rotor magnetic poles, wherein the actuator further comprises reinforcing means made of the same nonmagnetic metal material as the partition wall. That is, claim 31 sets forth that both the partition wall and the reinforcing means are made of a non-magnetic metal material.

In contrast to that set forth in claim 31, the APA discloses that the partition walls 216a and 236a are made of a non-metal.² Further, Hofmeister does not disclose any material in particular from which the housing 16 and partition wall are made. Accordingly, the APA fails to anticipate, or render obvious in view of Hofmeister, Applicants' claim 31. Claim 32 is allowable at least by virtue of its dependency.

Claim 37 sets forth a sealed actuator comprising a motor stator, a housing to which the motor is attached, a motor rotor, and bearings for rotatably supporting a rotation shaft of the motor rotor to the housing, wherein the bearings support the motor rotor at positions on the housing at both sides of a member constituting a sealing partition wall in a longitudinal direction of the motor rotor so that the housing directly receives a load applied to the bearings.

For example, as shown in Fig. 1, vacuum roller bearings 17, 18 are disposed at both sides of a member constituting a sealing partition wall 33 in a longitudinal direction of the motor rotor 12 so that the housing 23, 24 receives a load applied to the bearings. That is, the bearings 17, 18 do not act on the partition wall 33. Accordingly, the partition wall does not deform upon application of a load to the bearings.

In contrast to that set forth in claim 37, the APA discloses bearings 218 that are mounted directly on the partition wall 216a. See Fig. 7. Accordingly, a force acting on the bearings acts also on the partition wall so that such a possibility can not be neglected that the partition wall is deformed or the partition wall is broken.¹⁰

² Specification at col. 3, lines 44-52.

¹⁰ Specification at the sentence bridging columns 3 and 4.

Further, the Examiner cites Hofmeister as teaching optical encoders. But Hofmeister does not teach or suggest bearings for rotatably supporting a rotation shaft of the motor rotor to the housing, wherein the bearings support the motor rotor at positions on the housing at both sides of a member constituting a sealing partition wall in a longitudinal direction of the motor rotor so that the housing directly receives a load applied to the bearings, as set forth in claim 37.

For at least any of the above reasons, the APA does not anticipate, or render obvious with Hofmeister, Applicants' claims 37 and 38.

6) The Examiner rejected claims 26 and 29 under §103(a) as being unpatentable over Horikoshi and French 2,527,854 to Jacquin (hereinafter Jacquin). This rejection is believed to be moot.

7) The Examiner rejected claims 34 and 36 under §103(a) as being unpatentable over Horikoshi and US Patent 4,995,159 to Hancock (hereinafter Hancock). This rejection is believed to be moot.

8) The Examiner rejected claim 35 under §103(a) as being unpatentable over Horikoshi and Hancock, in further view of Jacquin. This rejection is believed to be moot.

9) The Examiner rejected claims 27, 30, 33, 39, and 42, under §103(a) as being unpatentable over the APA (possibly including Hofmeister) and Jacquin. Because this rejection is based on the APA and Hofmeister, Applicants arguments as set forth above with respect to claims 31 and 37 are pertinent here and, therefore, are incorporated by reference. Further, Jacquin does not teach or suggest anything to cure the above-noted deficiencies in the Examiner's attempted combination of the APA and Hofmeister.

Allowable Subject Matter

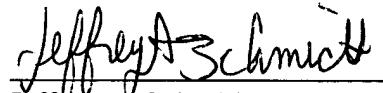
10) Applicants thank the Examiner for indicating that claims 1-25 [read 1-24] are allowed.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Jeffrey A. Schmidt
Registration No. 41,574

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE



23373

PATENT TRADEMARK OFFICE

Date: February 21, 2003

APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 25-30, 34-36 and 40-42 have been canceled without prejudice or disclaimer.

The claims have been amended so as to appear as follows (description of the amendments is contained in the “Remarks” portion of this Amendment in accordance with the rules for making amendments in Reissue applications):

31. A sealed actuator comprising:

a motor stator including a stator magnetic pole excited by a rotation-drive coil;

a housing to which said motor stator is attached;

a motor rotor including a rotor magnetic pole disposed opposite to a surface of said stator magnetic pole through a gap;

an encoder for measuring displacement of said motor rotor; and

a hermetically sealing partition wall made of a nonmagnetic metal material and disposed at the gap between said stator magnetic pole and said rotor magnetic pole, a space where said motor rotor is disposed being hermetically isolated from a space where said motor stator is disposed;

wherein said sealed actuator further comprises reinforcing means for reinforcing at least a part of said hermetically sealing partition wall, said reinforcing means being made of the same nonmagnetic metal material as said partition wall.

37. A sealed actuator comprising a plurality of unit sealed actuators connected in series to each other, each of said unit sealed actuators comprising:

a motor stator including a stator magnetic pole excited by a rotation-drive coil;

a housing to which said motor stator is attached;

a motor rotor including a rotor magnetic pole disposed opposite to a surface of said stator magnetic pole through a gap;

bearings for rotatably supporting a rotation shaft of said motor rotor to said housing;

an encoder for measuring displacement of said motor rotor; and

a hermetically sealing partition wall made of a nonmagnetic metal material and disposed at the gap between said stator magnetic pole and said rotor magnetic pole, a space where said motor rotor is disposed being hermetically isolated from a space where said motor stator is disposed;

wherein said bearings support said motor rotor at positions on said housing at both sides of a member constituting said sealing partition wall in a longitudinal direction of said motor rotor so that said housing directly receives a load applied to said bearings.